



TE KUNENGA | MASSEY
KI PŪREHUROA | UNIVERSITY
UNIVERSITY OF NEW ZEALAND

Aviation Guide

2024



massey.ac.nz/aviation

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UPDATED JANUARY 2023 Please note: The information contained in this publication is indicative of the offerings available in 2023 and subsequent years. This information may be subject to change. While all reasonable efforts will be made to ensure listed programmes are offered and regulations are up to date, the University reserves the right to change the content or method of presentation, or to withdraw any qualification or part thereof, or impose limitations on enrolments. For the most up to date information please go to [massey.ac.nz](https://www.massey.ac.nz)

KEY FACTS

- > Available at Manawatū
- > Equivalent to 3 Years of full-time study

BECOME PART OF A NEW GENERATION OF PILOTS

Learn how to fly in Massey's state-of-the-art training fleet, while gaining a qualification that sets you up for the aviation industry of the future.

WHAT IS IT LIKE?

Massey's Bachelor of Aviation (Air Transport Pilot) is a university undergraduate qualification intended for career pilots. It will not just train you to be a competent pilot, but to become a 'flight deck manager' with a university education, and an in-depth understanding of the aviation industry.

Why are we different?

We lead the field in flight training in New Zealand.

- > **THE ONLY PROFESSIONAL AVIATION DEGREE IN NEW ZEALAND**, integrating the Professional Pilot licensing requirements of the Civil Aviation Authority of New Zealand. Graduates are issued with a Commercial Pilot's Licence and a Multi-Engine Instrument Rating.
- > **EQUIVALENCE APPROVAL FROM THE NZCAA**
BAv students' examination results are accepted in lieu of CAA examinations, and flight examiners from the School are approved for conducting flight tests for issue of licences.
- > **ISO 9001-2015 CERTIFICATION**
A worldwide standard that characterises great management practices.
- > **STATE OF THE ART TECHNOLOGY**, including a full fleet of technologically advanced aircraft fitted with Garmin 1000 cockpit displays. Flight Simulation Training devices include DA 40 and DA 42 simulators.
- > **REAL-WORLD PROBLEM SOLVING**
Scenario-based flight training methodology builds the 'soft skills' required to produce professional aviators (decision making, communication, judgement, conflict resolution, workload management, threat and error, management, 'single pilot resource management' (SRM)).
- > **REQUIRED NAVIGATION PERFORMANCE (RNP)**
The School of Aviation became the first flight-training organisation

Bachelor of Aviation

BAv

in New Zealand to receive approval from the Civil Aviation Authority of New Zealand to carry out Required Navigation Performance (RNP) operations on its 12 Diamond DA 40 single-engine aircraft.

- > **ELECTRONIC FLIGHT BAGS**
Massey reflects airline practices, including the move to a mostly digital (paperless) cockpit via the use of EFBs. It is the only New Zealand flight training institution to do so. As a new Bachelor of Aviation (ATP) student you will be issued with an Apple iPad to be used as your EFB for the duration of your flight training practicum period.
- > **INDUSTRY ALLIANCES**
In recognition of the quality of training delivered in the BAv programme, Air NZ selected the School of Aviation as an 'Air NZ Preferred Flight Training Organisation'.
- > **PURPOSE - BUILT AVIATION CENTRE**
The state-of-the-art 2200 square metre Massey University Aviation Centre was officially opened on 18 October 2019. Designed to house both Bachelor of Aviation students and Aviation Management students under one roof, the facility has become a nucleus for the development and delivery of research-led aviation education and training.

ENTRY REQUIREMENTS

All applicants wishing to enrol in the BAv are required to meet the undergraduate admission requirements. See [massey.ac.nz/enrol](https://www.massey.ac.nz/enrol) for details. Furthermore as a Flight Training Organisation with the Air New Zealand Aviation Institute it is now a requirement that all prospective students complete the ADAPT pilot pre-screening tool as part of the application process (Stage One). Candidates should meet a satisfactory standard in this test in order to be invited to the subsequent stage of the School of Aviation selection process (i.e. Stage Two).

Required results to progress to Stage Two Selection Board (see below) are 'Average', 'Above Average', or 'Good'. Candidates submitting a 'Below Average' result may attempt the ADAPT test again. Those submitting a 'Poor' result will not proceed to the interview stage. To ensure students can have a reasonable expectation of satisfactorily completing this degree, students must pass the Selection Board consisting of:

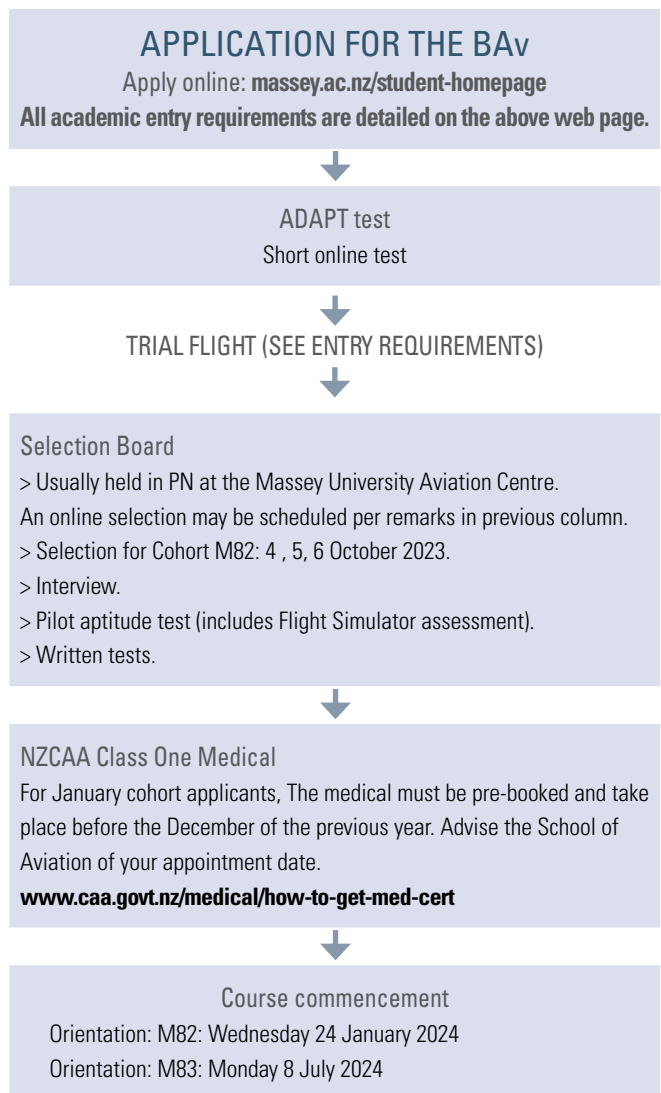


- > Pilot Aptitude assessment tests (physics, personality and problem-solving questions): 2 hours
- > A selection interview: 45 minutes.
- > Writing tasks:
 1. English (short essay and vocabulary assessment): 30 minutes
 2. Maths assessment: 30 minutes
 3. **TRIAL FLIGHT:** To ensure the best possible Selection Board experience, all candidates residing in New Zealand must have had at least one trial/introductory flight (or other hands-on flight experience) before being granted an interview appointment for Selection Board, Stage Two. Evidence of this be requested before a selection board appointment is confirmed.

There are two intakes per year into the Bachelor of Aviation programme: Semester One (January) and Semester Two (July). Interviews for Semester 1, 2024 will be held during 4, 5, 6 October 2023 and December 5 2023. Interviews for Semester 2, 2024 will be scheduled for a date TBC in late May 2024. Candidates will be advised of their appointment reporting time and venue closer to the time, once the School has received their ADAPT test scores.

Selection boards usually requires that candidates be present in person to enable the optimum opportunity to be assessed for the programme. In exceptional circumstances, a candidate may be offered an online selection board. This will be discussed with the candidate at the time. Where students are scheduled to attend the on - campus selection board, they must present in person at the Massey University Aviation Centre, 47 Airport Drive Palmerston North, New Zealand. It is preferred that students have passed maths (calculus), and physics at NCEA Level 3/Year 13 level or equivalent.

In order that all candidates can be assessed equally, an online selection board may only be offered in exceptional circumstances where an off-shore based candidate can produce evidence of a reason they cannot travel to NZ to attend a scheduled selection board. All such cases will be assessed on a case - by - case basis.



AIR NEW ZEALAND

PFTO | PREFERRED FLIGHT
TRAINING ORGANISATION

Massey University is an Air New Zealand
'Preferred Flight Training Organisation'.

OTHER REQUIREMENTS

NZCAA CLASS ONE MEDICAL CERTIFICATE

Candidates must also obtain a New Zealand Class One Medical Certificate in accordance with CAANZ medical requirements prior to commencing this degree. Evidence of either a current Class One Medical Certificate, or the date of the medical appointment, will be required for confirmation of the interview appointment (Stage Two). Refer to the NZ CAA website for more information: www.caa.govt.nz/medical/how-to-get-med-cert/

ENGLISH LANGUAGE COMMUNICATION

As per the CAA Advisory Circular AC61-2 Rev 4 "Pilot Licences and Ratings—Student Pilots" 14 February 2012, Rule 61.105(a)(3) requires a person to have sufficient ability in reading, speaking, understanding and communicating in the English language to enable them to adequately carry out the responsibilities of a pilot-in-command of an aircraft before a flight instructor can authorise the person to fly solo as a student pilot. Students must have gained the literacy credits at NCEA Level 2 required for University Entrance. In addition Massey University requires that prospective domestic students successfully attain a minimum of 14 credits (or equivalent) in a language-rich subject such as (but not limited to) English, history, art history, geography, biology. This is to demonstrate evidence of a student's ability to write an extended formal essay. International students must gain an IELTS score of 6.5 with no band lower than 6.0 – or pass an alternative approved English language test to an equivalent standard.

FIT AND PROPER PERSON

In simple terms, anyone holding or applying for an aviation document, or anyone who has control over the exercise of the privileges of an aviation document, must satisfy the Director of Civil Aviation that they are a fit and proper person to do so. This is a requirement of the Civil Aviation Act 1990, Section 9. An aviation document includes, for example, a licence, a rating, or an air operator certificate. This process will be undertaken in your second semester. Your instructor will advise you as to when to commence your application.

You will be required to apply for an up-to-date Criminal Convictions Report showing:

1. A conviction-free period of at least three years prior to the date on which training will commence; and
 2. No more than one conviction for drink driving
 3. An up-to-date Demerit Points and Suspension History Report (Traffic Offence History) showing a maximum of 65 demerit points* (or equivalent for international students) within the three years immediately prior to the date on which training will commence
- * Equivalent to two minor speeding offences (20 demerit points each) and a restricted driver carrying an unauthorised passenger (25 demerit points)

NOTE: A conviction for drink driving or drug offences (or other serious offence or serial offending) while you are on the course breaches the Fit and Proper Person criteria, and your training may be terminated.

ENROLMENT FOR THE FIRST TIME IN January 2024

(Please note the early starting date)

Students enrolling in the degree for the first time in January 2024 will be enrolled in the compulsory courses as listed on pages 6 and 7. The programme structure of 480 credits delivered in three calendar years will remain unchanged. Please contact Massey for more information.

NB: If you are interested in applying for Semester 2, 2024 (July 2024) please contact Massey University on 0800 MASSEY (0800 627739) well before 01 May 2024 for information on courses in which to enrol and selection board dates etc.

GRADUATE PATHWAYS

1. Massey University Assistant Flight Instructor Scheme (by selection).
2. Massey Flight Instructor graduates have direct pathways to roles with other NZ domestic flight training organisations and international training schools in Australia (e.g., Bass Air and Soar Aviation) as per demand from these organisations.

Assistant Instructor Scheme

- > Bachelor of Aviation Air Transport Pilot
- > FIC Graduates: Performance based selection and interview.
- > Employment: fixed-term position
- > Upgrade to B Cat



DATES AND DEADLINES

	January commencement		July Commencement	
	Domestic students	International students	Domestic students	International students
Apply online	Due 1 Oct	Due 1 Oct	Due 1 May	Due 1 April
Selection Board	October	October	Early June	Early June
NZCAA Class 1 Medical Certificate	Due by 15 December		Due start of July	
University Entrance	NCEA results published early January. ICE and IB results released in January.		Evidence of UE status must be submitted no later than 30 June.	
Orientation	Mid-January		Mid-July	

FIRST YEAR STUDY PLAN

JANUARY 2024 COMMENCEMENT

SEMESTER ONE 2024

- 190.104 Principles of Navigation
- 190.107 Human Performance
- 190.112 Introduction to Flying
- 190.113 Aviation Meteorology 1
- 190.114 Aircraft Systems 1
- 190.116 Introduction to Management in Aviation

SEMESTER TWO 2024

- 190.120 Aeronautical Legislation
- 190.123 Aircraft Systems 2
- 190.124 Aircraft Performance
- 190.154 Principles of Navigation
- 190.164 Aeroscience
- 190.220 Managing Airline Systems

JULY 2024 COMMENCEMENT

SEMESTER TWO 2024

- 190.104 Principles of Navigation
- 190.107 Human Performance
- 190.112 Introduction to Flying
- 190.113 Aviation Meteorology 1
- 190.114 Aircraft Systems 1
- 190.164 Aeroscience

SEMESTER ONE 2025

- 190.116 Introduction to Management in Aviation
- 190.120 Aeronautical Legislation
- 190.121 Aviation Meteorology
- 190.123 Aircraft Systems
- 190.124 Aircraft Performance
- 190.154 Principles of Navigation

BAV COURSES: YEARS ONE AND TWO (PARTS 1-4)

Courses include those that are designed to meet the required competencies to achieve the Commercial Pilot Licence, multi-engine instrument rating and Airline Transport Pilot Licence subject theory credits (i.e. integrated courses), plus Air Transport Pilot Subject Courses (30 credits) and Aviation Management Subject Courses (30 credits).

100 LEVEL	200 LEVEL	300 LEVEL
190.104 Principles of Navigation I	190.201 Aircraft Systems 3	> 190.351 Aircraft Systems 4
190.107 Human Performance	190.203 Air Traffic Control /Aviation Law	> 190.356 Aerodynamics 2
190.112 Introduction to Flying	190.204 Flight Planning and Advanced Navigation (Part 1)	
190.113 Aviation Meteorology 1	190.205 Crew Resource Management	
190.114 Aircraft Systems 1	190.206 Aerodynamics 1	
190.116 Introduction to Management in Aviation	190.220 Managing Airline Systems	
190.120 Aeronautical Legislation	190.221 Climatology	
190.121 Aviation Meteorology 2	190.237 Heavy Aircraft Performance	
190.123 Aircraft Systems 2	190.254 Flight Planning and Advanced Navigation (Part 2)	
190.124 Aircraft Performance	190.288 Advanced Aircraft Handling	
190.154 Principles of Navigation II		
190.164 Aeroscience		

Massey's fleet includes 12 Diamond DA40 single-engine trainers, two Diamond DA42 twin engine trainers (pictured) and a Robin R2160 fully-aerobatic two-seat trainer.

BAV THIRD YEAR OPTIONS

FLIGHT INSTRUCTION COURSE

By selection only. All courses are compulsory. Candidates completing the Flight Instruction Option must complete the necessary competencies to achieve a CAA NZ 'C' Category Flight Instructor Rating, and pass the following integrated courses:

190.282 Introduction to Flight Instruction

190.285 Aerobatic Aircraft Handling

190.288 Advanced Aircraft Handling

190.301 Flight Instructor Human Factors

190.315 Flight Instruction Fundamentals 1

190.335 Flight Instruction

OR

AVIATION BUSINESS MANAGEMENT

At least 60 credits including 190.288 (Advanced Aircraft Handling) must be selected from the 190 prefix (Aviation) and up to 60 credits may be selected from the following prefixes:

- > 110.xxx Accountancy
- > 114.xxx Human Resource Management
- > 115.xxx Business
- > 125.xxx Finance
- > 152.xxx Management
- > 153.xxx Dispute Resolution
- > 155.xxx Business Law
- > 156.xxx Marketing
- > 157.xxx Information Systems
- > 178.xxx Economics
- > 219.xxx Business Communication

Note: At least 30 credits must be at 300 level



Bachelor of Aviation Management

BAvMan

KEY FACTS

- > Available at Manawatū
- > Equivalent to 3 Years of full-time study

WE FOCUS ON HUMAN FACTORS AND AVIATION MANAGEMENT COMPETENCIES

This programme is aimed at those candidates entering the aviation industry or for those already employed in aviation (with or without a professional licence) but with no previous tertiary qualifications.

The BAvMan evolved from the aviation management major in the Bachelor of Aviation and was first introduced in 2002.

QUALIFICATION OVERVIEW

The BAvMan is a specialised aviation qualification, preparing you for a management role. If you're already employed in the industry this programme is a great way to qualify yourself for career advancement. Some professional aviation qualifications may be eligible for cross-credit into the degree. The Massey school of Aviation also has relationships with the Singapore Aviation Academy and the Sri Lanka Airport and Aviation Academy.

REQUIREMENTS

Schedule A: Compulsory Courses (150 credits)

Code	Title	Credits
190.109	Aviation Studies	15
190.115	Introduction to Aeronautics	15
190.116	Introduction to Management in Aviation	15
190.117	Introduction to Human Factors	15
190.216	Aviation Human Factors	15
190.220	Managing Aviation Systems	15
190.224	Environmental Impacts of Aviation	15
190.225	Introduction to Research Methods in Aviation	15
190.327	Managing Cultures in Aviation	15
190.340	Contemporary Issues in Aviation Security	15

Schedule B: Aviation Management Courses* (Select 120 credits)

190.210	Aviation Safety Management	15
190.211	Aviation Strategic Management	15
190.222	Basic Air Safety Investigation	15
190.240	Air Power	15
190.299	Aviation Special Topic	15
190.306	Airline Strategic Management	15
190.307	Airport Planning	15
190.308	Airport Operational Management	15
190.309	Design of Airways and Air Traffic Systems	15
190.313	Advanced Aviation Human Factors	15
190.314	Legal Issues in Aviation	15
190.318	Air Transport Economics	15
190.328	Aviation Management Practicum	15
190.398	Aviation Internship Project	15
190.399	Special Topic	15

Not all courses are offered every year

This is a guide only, for comprehensive up-to-date information on each course including offerings, requirements and restrictions please see the Massey website: massey.ac.nz/bavman

STRUCTURE

Candidates for the Degree of Bachelor of Aviation Management shall follow a flexible programme of study, which shall consist of courses totalling at least 360 credits, comprising:

- not more than 135 credits at 100 level;
- at least 60 credits at 300 level; and including:
 - at least 270 credits from the Schedule to the Degree, including at least 60 credits at 300 level;
 - all compulsory courses in the Schedule to the Degree
 - up to 90 credits from the schedules of other undergraduate degrees.

AVIATION MANAGEMENT PRACTICUM / AVIATION SPECIAL TOPIC

During their final year, BAvMan students enrolled in these 'internship' courses have the opportunity to engage in real-world projects under supervision for aviation-related organisations in New Zealand or internationally. The School of Aviation strongly encourages students to consider integrating real world experience into the BAvMan degree wherever possible. Students will receive credit for successfully working in an approved aviation organisation for a specified project and/or duration, and completing suitable work reports. This opportunity lets BAvMan students apply theories learned in class to a variety of aviation scenarios.

DELIVERY

Most courses for the Bachelor of Aviation Management are available internally at the Manawātū campus in Palmerston North or by distance. International students may enrol for distance study via the Singapore Aviation Academy in conjunction with Massey.

SUGGESTIONS FOR YOUR FIRST YEAR

Semester One (February to June)

190.116 Introduction to Management in Aviation
190.117 Introduction to Human Factors
100-level elective course (Business or other)
100-level elective course (Business or other)

Semester Two (July to November)

Option 1	Option 2
Four core courses: 190.109, 190.115, 190.216, 190.220	Any two of the following core courses: 190.109, 190.115, 190.216, 190.220
	Plus a BAvMan elective course (e.g. 190.210 or 190.240)
	Plus a non-Aviation, 200-level elective course

■ MICHAEL FORDE

BAVMAN - CREW/OPERATIONS CONTROLLER, AIR NEW ZEALAND

"The degree was able to provide me with a comprehensive look into the aviation industry from both a practical and theoretical perspective.

Highly variable assignments proved engaging and the opportunity to

take elective courses further broadened my knowledge in other business disciplines. I was fortunate enough to participate in an enlightening internship opportunity at Airways which provided me with first-hand experience in a professional environment. It provided a networking opportunity where I was introduced to like-minded people and allowed me to understand various career paths. I believe having this degree has allowed me to greatly improve my analytical and writing skills and given me the edge over other prospective employees. Following my degree completion at the height of the pandemic at the end of 2020, I was fortunate to start a position as a Customer Service Agent for Air New Zealand at Wellington airport. In 2022, I transferred down to Christchurch and started an excellent opportunity as a Crew/Operations Controller for the airline, which has proved challenging but very rewarding."



OVERSEAS EXCHANGE

Gaining international experience during your time at Massey University will strengthen your CV and benefit you throughout your career.

Businesses and companies increasingly look to employ applicants who demonstrate a global perspective to work with their culturally diverse employees and overseas clients.

Studying overseas on exchange for a semester as part of your Massey aviation degree can propel you along your path toward an exciting career in the aviation industry. Courses (papers) successfully completed during the exchange period are credited back to your Massey aviation degree. You will pay the usual tuition fees for 60 credits of study in your Massey aviation degree programme for your studies at the host university. Tuition fees can continue to be paid to Massey by

StudyLink if you qualify for StudyLink assistance. Massey University School of Aviation encourages its students to consider applying for an international student exchange opportunity to increase their understanding of the exciting and dynamic global aviation industry.

Previous School of Aviation exchange students have leveraged their experiences as exchange students at universities such as Embry Riddle Aeronautical University, (USA), European Business School (Germany) and in the UK to secure exciting roles upon graduation.

Scholarships – such as the 'Fuji Xerox Global Student Exchange Scholarship' – are available to assist students meet their travel and study costs while on exchange. The application deadline is 20 August each year.

KEY FACTS

- > Available at Manawatū
- > Available via Distance Learning
- > 1 to 1.5 Years of full-time study

Massey University's Master of Aviation is a 180-credit Master's qualification. The 180-credit Master's offers a rigorous programme of learning yet can be achieved in three semesters (one-and-a-half years). Students should have achieved a B- grade Average in the highest level courses in their undergraduate degree.

You may choose from two pathways: research or professional practice. The Master of Aviation may be studied by distance learning.

Turn your passion into a career

Massey University is the only place in New Zealand where you can turn your passion for aviation into a tertiary qualification. We are an internationally-recognised pilot training facility, but we also give you a broad knowledge of the global aviation industry. You will learn communication, management and administrative skills that will broaden out the range of careers open to you in the aviation industry.

Research-led learning

Massey teaching is research-led and our academics are internationally-ranked and among the best in the world. Our teaching staff are widely published and are in demand as keynote speakers on topical global issues. International visitors regularly seek out visits to our facilities to learn more about what we do.

World-leading lecturers and supervisors

We work to help you succeed. Massey University offers smaller classes and more personalised learning than many other tertiary institutions, giving you greater access to lecturers and the help you need to succeed and thrive during your master's study.

Massey's aviation staff are internationally-renowned for their research and teaching and learning methods. You will be working with internationally-recognised specialists.

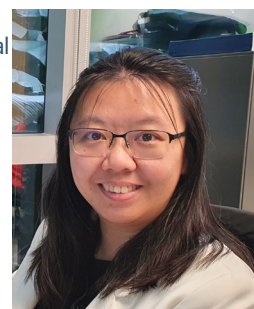
Master of Aviation

MAv

■ HAW WEN TUNG

MASTER OF AVIATION (PROFESSIONAL PATHWAY)

I am a civil engineer by training and a certified Project Management Professional (PMP) currently working as a senior aviation consultant in numerous airport development projects. I enrolled in the Master of Aviation (Professional Pathway) while working as a Project Manager at Auckland Airport. The curriculum is designed to promote self-discipline, learning and development with readily available guidance from the lecturers. The e-library has an extensive range of resources to assist with the research work. The programme is designed to allow full flexibility for working professionals in obtaining postgraduate degrees while keeping a full-time job and without physical presence for lectures or exams. Additionally, I am very grateful for the financial support offered by Massey University during the Covid19 outbreak when my income was significantly reduced. The Covid19 bursary has helped lighten my financial commitment and enable me to complete my studies ahead of schedule. Since the completion of my studies, I am now working in the Singapore office of To70 (www.to70.com) - an international aviation consultancy firm. The knowledge and skills I've learned through the Massey programme have provided me with a different perspective on various strategic aviation businesses within the industry. It has helped me to understand the concerns and priorities of our client airports, aviation authorities, airlines, etc. which add much value to my current job." Connect with Haw Wen Tung at [linkedin.com/in/hawwen/](https://www.linkedin.com/in/hawwen/)





RESEARCH PATHWAY

If you choose this pathway your study will include at least 60 credits of taught courses including a compulsory Research Methods course. Part Two will incorporate a minimum of 60 credits of research.

Part One (at least 60 credits)

Compulsory courses:

Code	Title	Credits
190.704	Research Methods in Aviation	30

Subject courses:

190.701	Human Factors for Professional Aviation	30
190.703	Management in Aviation Systems	30
190.720	Aviation Strategic Management	30
190.721	Design and Management of Airports	30
190.790	Special Topic	30

Part Two (at least 60 credits)

190.890	Thesis (Part 1)	45	
190.891	Thesis (Part 2)	45	Corequisite: 190.890
190.892	Thesis (Part 1)	60	
190.893	Thesis (Part 2)	60	Corequisite: 190.892
190.895	Research Report	60	
190.898	Thesis	90	
190.899	Thesis	120	

PROFESSIONAL PATHWAY

Those wanting a more practice-based qualification which reflects their industry experience should enrol in the Professional Practice option.

This option includes two compulsory aviation management courses, elective aviation courses and culminates in a 60-credit 'Professional Practice in Aviation' course. Students who are already aviation professionals may wish to draw on their current aviation role for the purpose of a case study.

Part One (120 credits)

Compulsory courses (60 credits):

190.703	Management in Aviation Systems	30	
190.720	Aviation Strategic Management	30	

Subject courses (60 credits):

190.701	Human Factors for Professional Aviation	30	
190.721	Design and Management of Airports	30	
190.790	Special Topic	30	Permission HoS
190.791	Special Topic	30	Permission HoS

Part Two (60 credits)

190.894	Professional Practice in Aviation	60	
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Doctor of Philosophy (Aviation) PhD

KEY FACTS

- > Available at Manawatū
- > Equivalent to 3 Years of full-time study
- > Equivalent to 6 Years of part-time study

THE ULTIMATE ACHIEVEMENT IN AVIATION AT TERTIARY LEVEL IS THE DOCTOR OF PHILOSOPHY – AVIATION.

The Doctor of Philosophy (PhD) is a prestigious research qualification which is essential for a career in any research institution or university.

The School of Aviation is active in research in several areas, including flight training devices, transference of learning, risk taking, accident legislation, call-sign confusion, crew resource management, and the effect of sleep deprivation. The School's research outcomes contribute to enhancing safety and efficiency, and improving the body of aviation knowledge in this dynamic industry.

The School also has an active programme of postgraduate research, with a number of students currently enrolled. Postgraduate students are encouraged to disseminate their work by publishing it in relevant peer-reviewed journals or by presenting it at conferences.

University scholarships may also be available for students wishing to undertake research at postgraduate level.

ENTRY REQUIREMENTS

The doctoral programme is open to academically able students who have achieved First Class Honours or Distinction or Second Class Honours (Division I) in a Master's or Bachelor's (Honours) programme. A PhD is completed by thesis and is expected to take three years of full-time study or up to six years of part-time study.

Your initial research proposal needs to include sufficient information for your prospective supervisor to be able to assess your current knowledge around your research topic. It will also be used by the School of Aviation to gauge whether there is a current staff member within the School who is able to supervise your research. Our supervisors are active and well known in their fields of expertise. When you use the expertise search, use filters to narrow your search.

Students are enrolled provisionally in the first year of PhD study, during which time your research proposal is developed. You are then confirmed into the doctoral degree.

ENROLLING IN THE DOCTORAL PROGRAMME

You cannot enrol directly into a doctoral programme – you need to apply to the Doctoral Research Committee (DRC) for admission. If you're a New Zealand citizen or hold New Zealand permanent residency, you can download a DRC 2 Application Form for Provisional Registration as a PhD candidate, which can be found on the Graduate Research School (GRS) website: massey.ac.nz/graduateresearchschool. See also the Doctoral Application Process page at: massey.ac.nz/phd.

International students should see massey.ac.nz/international for information on applications, requirements, and visas.



■ VINOLIA SALES, PHD 2022, WITH ASSOCIATE PROFESSOR KAN TSUI

Tonga's Director of Civil Aviation Vinolia Salesi completed her PhD in 2022. Her doctoral thesis with publications was entitled "Identifying challenges of aviation growth within the South Pacific Region". This topic was chosen to recognise the fact that aviation is one of the keystones for economic development in the South Pacific Region (SPR). It enabled her to identify gaps in aviation polices in the region that may contribute to the limited growth within the SPR aviation industry. By identifying gaps within the literature, her study will contribute to the aviation and tourism literature (with particular reference to the SPR region) and to the ICAO initiative of 'No Country Left Behind' whereby ICAO aims to ensure that "all States have access to the significant socio-economic benefits of safe and reliable air transport." (www.icao.int/about-icao/nclb) Vinolia says her skillset as an academic researcher has been considerably enhanced because of her doctoral journey. Despite the severe impact of Covid on her research and data collection stage Vinolia was ultimately rewarded by an oral examination passed without emendations. Another high point was seeing her articles published in journals such as Asia Pacific Journal of Tourism Research and Journal of Air Transport Management. Vinolia has now resumed her role as Director of Civil Aviation Tonga, but looks forward to more opportunities to undertake further research potentially exploring utilising research techniques more suited to the Pacific culture.

Graduate Diploma in Aviation

GDipAv

KEY FACTS

- > Available at Manawatū
- > Equivalent to 1 year of full-time study

QUALIFICATION OVERVIEW

The Graduate Diploma in Aviation (GDipAv) is for those already working in the aviation industry who want to expand their knowledge in areas that may enhance their industry experience and opportunities. It has been developed from the Graduate Diploma in Business Studies. In the GDipAv (Aviation Studies) option, two compulsory courses in aviation management systems and human factors provide the core, along with six elective courses – building a solid aviation qualification.

The GDipAv (Flight Instruction) option includes five integrated compulsory courses and two courses taken from the schedule to the Bachelor of Aviation Management degree.

ENTRY REQUIREMENTS

To qualify for entry into this programme you need to hold a relevant undergraduate degree or be able to demonstrate relevant practical, professional or scholarly experience equivalent to that of a graduate. You'll need to satisfy the School of Aviation that you have the background and experience to follow the programme with a reasonable chance of success.

NOTE: Candidates are deemed to have met the prerequisite requirements for the 200-level courses listed in the following schedule when they've been admitted to the programme.

STRUCTURE

Students enrolling in this programme must successfully complete 75 credits at 300 level. You will need to follow an approved course of study of 120 credits in one of the following endorsements as listed in the schedule.

1. AVIATION STUDIES

Compulsory courses:

Code	Title
190.216	Aviation Human Factors
190.220	Managing Aviation Systems

Plus 90 credits with at least 75 credits at 300-level from the following:

190.211	Aviation Strategic Management
190.222	Basic Air Safety Investigation
190.224	Environmental Impacts of Aviation
190.225	Intro Research Methods in Aviation
190.240	Air Power
190.249	Aircraft Maintenance Management (30-credit course)
190.306	Airline Strategic Management
190.307	Airport Planning
190.308	Airport Operational Management
190.309	Design of Airways and Air Traffic Systems
190.313	Adv Aviation Human Factors
190.314	Legal Issues in Aviation
190.317	Evaluation Methods in Aviation
190.321	Adv Air Safety Investigation
190.327	Managing Cultures in Aviation
190.340	Contemporary Aviation Security

NOTE: Not all courses are available every year.

2. FLIGHT INSTRUCTION

A Commercial Pilot Licence (Aeroplane) is a prerequisite for this programme. An application to the Flight Instruction Course is required. Please contact the School for details.

Compulsory courses:

190.282	Flight Instruction Foundation Studies
190.285	Introduction to Aerobatic Principles
190.301	Flight Instruction Human Factors
190.315	Flight Instruction Fundamentals I
190.335	Flight Instruction

Plus 30 credits at 200 or 300 level from 190-prefix courses.



■ **HARRY SHAW, BACHELOR OF AVIATION MANAGEMENT 2020**

"Following my passion for aviation, I enrolled in the Bachelor of Aviation Management degree in 2020 in order to secure a career in the industry. In my last semester my internship /practicum courses saw me based at the RNZAF Base- Ohakea. This has been the highlight of my time at university. Placed with the RNZAF Airfield Management Team involved working in and around large international military aircraft whilst maintaining the aerodromes safe operating standards. The networking opportunities generated through this internship has seen me secure a summertime job managing the airfield. I loved every single day of my placement! There is no better way to apply the knowledge gained throughout the BAvMan than doing so in a practical environment"

Certificate in Aviation Studies

CertAvStuds

KEY FACTS

- > Available at Manawatū
- > Available via Distance Learning
- > Equivalent to 1 semester of full-time study

WHAT IS IT LIKE?

Massey is the only place in New Zealand where you can turn your passion for aviation into a tertiary qualification.

We are an internationally-recognised pilot training facility, but we also give you a broad knowledge of the global aviation industry.

You will learn communication, management and administrative skills that will broaden out the range of careers open to you in the aviation industry. The Certificate in Aviation Studies consists of 60 credits (four courses). You can either stop here, or continue studying towards a bachelor's degree like the Bachelor of Aviation Management. Should you choose to continue studying, the credits from your certificate study will be credited towards this degree.

GET A TASTE OF AN AVIATION QUALIFICATION

The Certificate in Aviation Studies (CertAvStud) is a 60-credit (4x course) programme. It enables prospective aviation students to include enrol in three or four aviation management courses. You can take one non-aviation elective course if you wish. Aviation courses undertaken in the CertAvStuds draw on existing entry-level courses offered in the Bachelor of Aviation Management, giving you an insight into what studying towards this qualification may be like. Topics include:

- > Management in Aviation
- > Human Factors
- > Aviation Studies.

KEY SKILLS FOR PROGRESSING YOUR CAREER

You will gain knowledge of specialist aviation subjects to assist your professional development. You will also learn some of the essential skills necessary to move into senior roles and those that are hallmarks of tertiary study:

- > Self-directed and independent learning
- > High-level oral and written communication skills
- > Basic research skills

Graduating with a Certificate in Aviation Studies will give you a solid platform to move into further tertiary study, if you so wish.

Contract flight training

In addition to degree programmes Massey University School of Aviation offers contract flight training to airlines and international aviation training institutions wishing to train cohorts of prospective pilots. Massey University School of Aviation, a NZ CAA Rule Part 141 certified flight training organisation, offers world class training and facilities with a fleet of technically enhanced G1000 (full glass cockpit) Diamond DA40 and DA42 training aircraft fully equipped and certified for PBN operations.

Flight simulation training devices include a new-generation Diamond DA-42 flight simulator, a Frasca Tru-Flite simulator plus part-task training devices and DA 40 Mentor. Training packages include training, accommodation and meals / laundry plus 'operations support' and all students have access to the University's pastoral care and accommodation facilities.

All students are issued with an iPad-based Electronic Flight Bag (EFB), and their uniforms, (except for strong black footwear and black socks which they must provide). International students must provide evidence of travel and medical insurance.



FLIGHT TRAINING OPTIONS

Basic Training – Airline Cadetship 69 weeks.

This training course is designed to prepare cadet pilots for entrance into an airline environment using scenario-based training methodologies (SBT), check-lists, SOPs and en-route guides. It includes PPL(A) and CPL (A) and Multi-Engine Instrument Rating. (MEIR)

- > 237 hours in both single-engine and multi-engine aircraft, and multi-engine simulator, comprising:

I. DA42 single-engine	182 hours
II. DA42 simulator	10 hours
III. DA42 Multi-engine	25 hours
IV. DA42 multi-engine sim	20 hours
- > All relevant pre-flight and post-flight ground briefings
- > PPL (A) and CPL (A) and IR theory
- > CAA NZ subject examinations
- > CAA NZ Licence / rating issues

Advanced Training Options

1. Airline Bridging Course ('ABC')
 - > Two weeks
 - > Equivalent of EASA MCC
 - > Eight 4-hour sessions
 - > Sixteen hours PF and 16 hours PM
2. King Air Type Rating
 - > Three weeks
 - > Limited numbers per cohort



Remotely Piloted Aircraft Systems

Professional training courses

The rapidly developing unmanned aviation (RPAS) sector has seen the need for increased formalisation and professional oversight of the industry, resulting in a drive by UAVNZ to ensure the quality and integrity of training for all clients seeking to upskill themselves in operating this technology in NZ. Massey University School of Aviation is one of only five New Zealand RPAS training organisations to be officially recognised as a UAVNZ Recognised Training Provider. Signatories agree to abide by a set of professional standards which embed standards governing the quality of the training, peer reviews of the training, and a complaints process for clients who consider that their training failed to meet these professional standards. This recognition fits seamlessly with Massey's continuing drive for best practice and 'safety -first' approach which governs both its Bachelor of Aviation degree and RPAS training courses. As a CAANZ Part 141 training provider (fixed wing and RPAS) Massey offers two professional RPAS training courses:

- > Introduction to Regulations and Operator Conduct
- > Human factors for RPAS Operators

INTRODUCTION TO REGULATIONS AND OPERATOR CONDUCT

RPAS continue to prove their capabilities in the aviation marketplace as utility vehicles and, with increasing technology, have become a dominant force in many aviation sectors. This course encompasses an ever-widening cache of NZ RPAS operators. Massey has now graduated more than 1300 certified RPAS operators from this course since its inception, including:

- > Dept. of Conservation
- > Electricity lines companies
- > Geospatial Analysts
- > Higgins Roading and Infrastructure
- > NZ Fire Service
- > NZ Police
- > NZDF
- > NZUSAR
- > Professional beekeepers
- > Regional Councils
- > RNZAF
- > Stuff NZ.

Industries RPAS operators are working within include:

- > Aerial mapping
- > Forestry
- > Maintenance Facility Management companies
- > Oil and gas
- > Oil and gas
- > Real estate
- > Tourism

COURSE OVERVIEW

The three-day course is designed to meet CAANZ requirements for people with little or no aviation experience who want to enter the industry, or to expand their RPAS operations further. Successful outcomes from this course meet the initial training requirements for CAA Rule Part 102. The School is a CAA Rule Part 141 certified provider for both piloted and non-piloted training.

Graduates of the course will be able to:

- > Identify threats to your operation and develop methods of mitigation
- > Interpret the various aviation documents and regulations and be able to apply these to your operation
- > Practice and comprehend radio telephony procedures
- > Submit as evidence of training from a Part 141-M6 training organisation for an RPAS Part 102 Operator Certificate.
- > Understand the conduct required to operate an RPAS in accordance with aviation best practice

COURSE DELIVERY AND ASSESSMENT: On-Campus or Online

The course is available as a three day on-campus training course comprising eleven modules. Alternatively, the theory modules may be undertaken online, followed by the practical assessment at a later date.

The course has 3 sections:

- > Online assessment
- > Theory modules
- > Practical flight examination



■ RANGITIKEI CIVIL DEFENCE RESPONSE TEAM (CDRT)

"The Rangitikei Civil Defence Response Team (CDRT) has been using remotely piloted aircraft systems (RPAS) for search and rescue and rural firefighting since 2015. Starting out with a DJI Phantom 2 the RPAS quickly proved itself invaluable for a wide range of public safety applications. In the seven years since, the team has put its RPAS capability to good use supporting police, land search and rescue, fire, civil defence, and local government operations on numerous occasions. As aircraft systems became bigger, more capable and more expensive, and regulations evolved, the team's management saw the need to professionalise its RPAS capability through operator certification and seeking external assurance of its operations. Massey University provided flight instruction and certification for the team's RPAS operators and have assisted RCDRT with their Part 102 exposition (application to the Civil Aviation Authority to operate outside the Part 101 rules). The team's manager, Paul Chaffe, notes "Massey University School of Aviation has been instrumental in helping formalise and professionalise the mahi we do for our communities. Their staff are knowledgeable and approachable and we appreciate their support."

Successful completion of all three sections gains candidates the "Massey University Certificate of Competency – Remotely Piloted Aircraft Systems", which complies with the initial training requirements for Part 102 operators. The 10 Core Modules include:

- > Aeronautical information publications
- > An introduction to the Airshare website.
- > Call signs
- > Making and interpreting radio calls
- > Meteorology
- > Notice to Airmen (NOTAM)
- > Operation planning
- > Procedures and phraseology
- > Radio wave propagation
- > Regulations
- > Safety management systems
- > Threats
- > Transceivers
- > Visual navigation charts

Note: The final elective module can be tailored for a particular organisation or industry (e.g. forestry, NZ Defence Force, agricultural operations, regional councils, etc.). A practical demonstration of pre-flight planning, regulations, and operator conduct is included.

RPAS FLIGHT EXAMINATION

Pre-flight test briefing

Field work

An RPAS flight test examination. (Multi Rotor Manual Reversion)

For those organisations holding NZCAA Part 102 Certificates, the School is authorised to conduct annual 'Part 102 MultiRotor Annual Operational Competency Assessments (OCAs) – including night-rated OCA assessments where required.

HUMAN FACTORS FOR RPAS OPERATORS COURSE

Developed by Massey's in-house RPAS consultant and the RPAS team leader who observed that Human Factors principles applying to pilots of manned aircraft are also relevant to the operators in the unmanned aircraft industry. Consisting of 10 topics including the final assessment, it is particularly relevant to Part 102 operators and/or those engaging in multi-crew operations, night operations, and large, high-risk complex operations. Those applying for, or renewing, an OCA will find it particularly useful. The course covers a wide variety of Human Factors pertaining to the operation of unmanned platforms in many different scenarios giving it international appeal and relevance. RPAS operators based in NZ or offshore are welcome to enrol. Modules include:

- > Crew resource management and communication
- > Discussion of accidents (manned and unmanned examples), aimed at getting candidates to start applying their knowledge to various scenarios.
- > Human information processing
- > Introduction to Human Factors
- > Judgement and decision making
- > Safety culture and Just culture
- > Stress anxiety and depression Sleep and fatigue
- > Vision and visual illusions

COURSE DELIVERY AND ASSESSMENT

The course is offered as an online course. Assessment is by way of a series of short answer questions. A grade of at least 50% will be required to pass the assessment.

RPAS CONSULTANCY SERVICE

The School of Aviation also offers an RPAS consultancy service for those preparing their PART 102 Exposition for submission to the CAANZ. Contact the School of Aviation for more information on RPAS courses and the consultancy services. You can register at: massey.ac.nz/rpas



Internship opportunities

BRING YOUR SKILLS TO LIFE

Explore internship opportunities in Aviation Management and get insight into one of the world's most dynamic and exciting industries, and maximise your potential with leading NZ aviation organisations.

- > Air Chathams
- > Airways International
- > Aviation Security Service
- > Fieldair Engineering Ltd
- > Massey University School of Aviation
- > MPI (Biosecurity)
- > Oceania Aviation
- > Palmerston North Airport Ltd
- > PHI-International
- > TAIC
- > Tasman Cargo
- > Wellington International Airport